

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended) A system for provisioning ~~packet-based communication channels and time-division multiplexed (TDM) communication channels on~~ a subscriber line communication medium, and the system comprising:

- a pair of X-DSL modems configured to couple to one another via the ~~subscriber line communication medium and to communicate with one another over the communication medium via an X-DSL modulated communication channel~~;
- a first of the pair of X-DSL modems including:
 - input buffers configured to accept input of ~~both the~~ at least one TDM communications channels together with the at least one packet based communications channels and the at least one TDM communication channel including successive TDM frames;
 - a payload framer coupled to the input buffers and the payload framer loading a corresponding portions of the at least one TDM communications channels into each X-DSL frame, together with a corresponding portions of the at least one packet based communications channels into a remaining portion of each X-DSL frame; and the payload framer additionally loading each X-DSL frame with a parameter for synchronizing the frames of the at least one TDM communication channel on the first of the pair of X-DSL modems and a second of the pair of X-DSL modems; and
- a the second of the pair of X-DSL modems including:
 - a payload deframer for deframing both the at least one TDM communications channels together with the corresponding portions of the at least one packet

based communications channels in each X-DSL frame from the first of the pair of modems, and

- a TDM frame synchronizer coupled to the payload deframer for synchronizing the TDM frames of the at least one TDM communication channel on the first of the pair of X-DSL modems and the second of the pair of X-DSL modems utilizing the synchronization parameter embedded in each X-DSL frame by the first of the pair of modems, thereby maintaining TDM frame synchronization despite variations in a number of bits transmitted in a unit of time on the X-DSL modulated communication channel.

Claim 2 (Currently Amended) The system of Claim 1, wherein the ~~payload framer further embeds each X-DSL frame with a parameter for synchronizing the TDM communication channels processed by the pair of the modems.~~ at least one TDM communication channel comprises a first TDM communication channel and a second TDM communication channel each comprising one of: a full T1 service and a fractional T1 service.

Claim 3 (Currently Amended) An X-DSL modem ~~for provisioning packet based communication channels and time division multiplexed (TDM) communication channels on a subscriber line, and the X-DSL modem configured to couple to a communication medium for communication with an opposing modem via an X-DSL modulated communication channel, and the X-DSL modem comprising:~~

- input buffers configured to accept input of ~~both the~~ at least one TDM communications channels together with ~~the~~ at least one packet based communications channels and the at least one TDM communication channel including successive TDM frames;
- a payload framer coupled to the input buffers and the payload framer loading a corresponding portions of the at least one TDM communications channels into each X-DSL frame, together with a corresponding portions of the at least

one packet based communications channels into a remaining portion of each X-DSL frame; and the payload framer additionally loading each X-DSL frame with a parameter for synchronizing the frames of the at least one TDM communication channel on the X-DSL modem and the opposing modem, thereby maintaining TDM frame synchronization despite variations in a number of bits transmitted in a unit of time on the X-DSL modulated communication channel.

Claim 4 (Currently Amended) The X-DSL modem of Claim 3, wherein the ~~payload framer further embeds each X-DSL frame with a parameter for synchronizing the TDM channels;~~ at least one TDM communication channel comprises a first TDM communication channel and a second TDM communication channel each comprising one of: a full T1 service and a fractional T1 service.

Claim 5 (Currently Amended) A method for provisioning ~~packet-based communication channels and time-division multiplexed (TDM) communication channels on an X-DSL modulated subscriber line~~ a communication medium, and the method comprising:

- accepting input of ~~both the~~ at least one TDM communications channels together with the at least one packet based communications channels ~~and the at least one TDM communication channel including successive TDM frames;~~
- loading a corresponding portions of the at least one TDM communications channels into each X-DSL frame;
- determining a space availability in each X-DSL frame; ~~and~~
- adding ~~selected~~ corresponding portions of the at least one packet based communications channel ~~to into~~ each X-DSL frame loaded in the loading act, subject to the space availability determination in the determining act;

- loading each X-DSL frame with a parameter for synchronizing the frames of the at least one TDM communication channel despite variations in a number of bits transmitted in a unit of time on the X-DSL modulated communication channel.

Claim 6 (Currently Amended)

The method of Claim 5, ~~further comprising wherein~~ :

- ~~embedding each X-DSL frame with a parameter for synchronizing the TDM communication channels.~~ the at least one TDM communication channel comprises a first TDM communication channel and a second TDM communication channel each comprising one of: a full T1 service and a fractional T1 service.